



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,419	07/11/2003	David John Hillis	MRKS/0122	7081

7590 02/14/2006

WILLIAM B. PATTERSON  
MOSER, PATTERSON & SHERIDAN, L.L.P.  
Suite 1500  
3040 Post Oak Blvd.  
Houston, TX 77056

EXAMINER
----------

LE, HUNG CHARLIE

ART UNIT	PAPER NUMBER
----------	--------------

3725

DATE MAILED: 02/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/618,419

Applicant(s)

HILLIS ET.AL.

Examiner

Hung C. Le

Art Unit

3725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 - 53 is/are pending in the application.
- 4a) Of the above claim(s) 30 - 53 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/24/03 &amp; 3/29/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Restriction***

Applicant's response to restriction requirement, see "RESPONSE TO RESTRICTION REQUIREMENT DATED NOVEMBER 8, 2005", filed 12/08/2005, with respect to Claims 1 – 53 have been fully considered.

Applicant selected Claims 1 – 29 to be considered. Remaining claims 30 – 53 were cancelled by applicant.

### ***Specification***

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)),

Art Unit: 3725

and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or

REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a).

"Microfiche Appendices" were accepted by the Office until March 1, 2001.)

(f) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(g) BRIEF SUMMARY OF THE INVENTION.

(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(i) DETAILED DESCRIPTION OF THE INVENTION.

(j) CLAIM OR CLAIMS (commencing on a separate sheet).

(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 recites the limitation "the collapse resistance" in Line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 10 recites the limitation "the tubing" in Line 1. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 – 20, 23 - 29 are rejected under 35 U.S.C. 102(b) as being anticipated by A. M. Brenneke (2,575,938).

With respect to Claim 1:

Brenneke discloses: A method of increasing collapse resistance of a tubular (21), the method comprising:

- (a) locating a tool having at least one bearing member (13) within a tubular (21);
- (b) placing the bearing member (13) in engagement with a wall of the tubular (21) to apply a radial force to a discrete zone of the wall (See Fig. 2);
- © applying said radial force to further discrete zones of the wall (See Col. 5, Lines 2 – 14); and
- (d) selecting a level of the radial force to increase the collapse resistance of the tubular. (See Col. 5, Lines 2 – 14)

With respect to Claim 2:

Brenneke further discloses: said radial force is selected to induce compressive yield of at least an inner portion of the wall. (See Col. 2, Lines 8 –12)

With respect to Claim 3:

Brenneke further discloses: said radial force is selected to induce plastic deformation of at least an inner portion of the wall. (See Fig. 2, Col. 4, Lines 1 – 5)

With respect to Claim 4:

Brenneke further discloses: the bearing member (13) is a rolling element (Fig. 2) and the tool is moved relative to the tubular to provide a rolling contact between the rolling element and the tubular wall. (See Col. 4, Lines 33 – 36)

With respect to Claim 5:

Brenneke further discloses: moving the tool relative to the tubular to provide a sliding contact between the bearing member (13) and the tubular wall. (see Fig. 2, Col. 4, Lines 15 – 20)

With respect to Claim 6:

Brenneke further discloses: the tool is advanced axially relative to the tubular. (See Col. 4, Lines 15 – 20)

With respect to Claim 7:

Brenneke further discloses: the tool is rotated relative to the tubular about a longitudinal axis of the tubular. (See Col 4, Line 12 – 15)

With respect to Claim 8:

Brenneke further discloses: the tool is located within the tubular. (See Fig. 2)

With respect to Claim 9:

Brenneke further discloses: the tubular is subject to a degree of diametric expansion. (See Col. 4, Lines 33 – 36)

With respect to Claim 10:

Brenneke further discloses: the tubular is subject to permanent diametric expansion. (see Col. 4, Lines 33 – 36)

With respect to Claim 11:

Brenneke further discloses: the tubular experiences little or no diametric expansion. (See Col. 2, Lines 8 – 12)

With respect to Claim 12:

Brenneke further discloses: the tool is moved relative to the tubular such that the bearing member (13) describes a helical path along the tubular wall. (See Col. 4, Lines 12 – 15)

With respect to Claim 13:

Brenneke further discloses: the tool has a plurality of bearing members (13), and each bearing member is urged into engagement with the wall of the tubular to impart a radial force to a respective discrete zone of the tubular wall. (See Fig. 2)

With respect to Claim 14:

Brenneke further discloses: the respective discrete zones are circumferentially spaced. (See Fig. 2)

With respect to Claim 15:

Brenneke further discloses: the respective discrete zones are axially spaced.  
(See Col. 4, Lines 33 – 36)

With respect to Claim 16:

Brenneke further discloses: the bearing member (13) applies the radial force to the tubular wall as a point load. (See Fig. 2)

With respect to Claim 17:

Brenneke further discloses: the bearing member (13) applies the radial force to the tubular wall as a line load. (See Figs. 1 & 2)

With respect to Claim 18:



Brenneke further discloses: the bearing member is fluid pressure actuated. (See Col. 2, Lines 8 – 12)

With respect to Claim 19

Brenneke further discloses: the tool comprises a plurality of bearing members (13) and at least one of the bearing member is independently radially movable. (See Col. 4, Lines 49 – 53)

With respect to Claim 20:

Brenneke further discloses: the tool comprises a ball-peening tool and is impacted against the inner surface of the wall. (See Fig. 2)

With respect to Claim 23:

Brenneke further discloses: when execute on surface. (See Fig. 2)

With respect to Claim 24:

Brenneke further discloses: when execute downhole. (See Col. 4, Lines 13 – 20)

With respect to Claim 25:

Brenneke further discloses: the tubular (21) is located within a larger diameter tubular (22) (Fig. 2)

With respect to Claim 26:

Brenneke further discloses: the larger diameter tubular (22) is substantially unexpandable. (See Fig. 2)

With respect to Claim 27:

Brenneke further discloses: the tool creates a strain path in the wall of the tubular having a circumferential element. (See Fig. 2, Col. 4, Lines 12 – 20)

With respect to Claim 28:

Brenneke further discloses: the tool creates a circumferential strain path. (See Col. 4, Lines 12 – 20)

With respect to Claim 29:

Brenneke further discloses: the tool creates a helical strain path. (See Col. 4, Lines 12 – 20)

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 3725

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21 & 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brenneke (2, 575,938) in view of Marcovitch (3,643,485).

Brenneke discloses as stated above.

Marcovitch teaches: a method and apparatus for applying a die for drawing tubular workpieces.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the method and apparatus of Brenneke with the teachings of Marcovitch in order to utilize the tool for any tubular configuration.

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung C. Le whose telephone number is 571-272-8757. The examiner can normally be reached on M-F: 08:00am - 05:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached on 571-272-4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3725

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HCL  
01/19/06



DERRIS H. BANKS  
SUPERVISORY PATENT EXAMINER  
ELECTRONIC BUSINESS CENTER 3700